

EXHIBIT A

PTO/SB/05 (06-03)

Approved for use through 07/31/2003. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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19704 U.S. PTO
1910/661165
09/11/03

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>		Attorney Docket No.	543312000420
		First Inventor	Ravinder S. DHALLAN
		Title	METHODS FOR DETECTION OF GENETIC DISORDERS
		Express Mail Label No.	EV336629286US
APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>		MS Patent Application ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	
1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) (2 pages) <i>(Submit an original, and a duplicate for fee processing)</i> 2. <input checked="" type="checkbox"/> Applicant claims small entity status. <i>See 37 CFR 1.27.</i> 3. <input checked="" type="checkbox"/> Specification [Total Pages 340] <i>(preferred arrangement set forth below)</i> - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure		7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. <input type="checkbox"/> Computer Readable Form (CRF) b. Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies	
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18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: <input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input checked="" type="checkbox"/> Continuation-in-part (CIP) of prior application No.: PCT/US03/06198 <i>Prior application information: Examiner _____ Art Unit: _____</i> For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.			
19. CORRESPONDENCE ADDRESS			
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Address			
City		State	Zip Code
Country		Telephone	Fax
Name (Print/Type)		Registration No. (Attorney/Agent)	
Signature		Date	

Eric H. Witt 44,408
Signature September 11, 2003

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Dated: 9/11/03 Signature: Tamara Alcaraz

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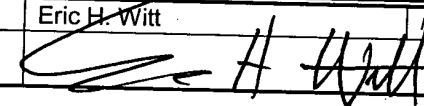
SUBMITTED BY					
Name (Print/Type)	Eric H. Witt		Registration No. (Attorney/Agent)	44,408	Telephone (650) 813-5755
Signature			Date	September 11, 2003	

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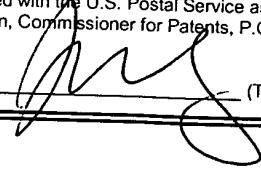
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SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Eric H. Witt	Registration No. (Attorney/Agent)	44,408
Signature		Telephone	(650) 813-5755
		Date	September 11, 2003

METHODS FOR DETECTION OF GENETIC DISORDERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of PCT/US03/06198, filed February 28, 2003, which claims benefit under 35 U.S.C. §119(e) of U.S. Provisional Patent Application No. 60/378,354, filed May 8, 2002, and which is a continuation-in-part of U.S. Patent Application No. 10/093,618, filed March 11, 2002, which claims benefit under 35 U.S.C. §119(e) of U.S. Provisional Patent Application No. 60/360,232, filed March 1, 2002; this application is also a continuation of PCT/US03/_____ , Method for Detection of Genetic Disorders, filed August 29, 2003 (Attorney Docket No. 54331-20004.41); this application further is a continuation-in-part of U.S. Patent Application No. 10/376,770, filed February 28, 2003, which claims benefit under 35 U.S.C. §119(e) of U.S. Provisional Patent Application No. 60/378,354, filed May 8, 2002, and which is a continuation-in-part of U.S. Patent Application No. 10/093,618, filed March 11, 2002, which claims benefit under 35 U.S.C. §119(e) of U.S. Provisional Patent Application No. 60/360,232, filed March 1, 2002. The contents of these applications are incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

[0002] The present invention is directed to a method for the detection of genetic disorders including chromosomal abnormalities and mutations. The present invention provides a rapid, non-invasive method for determining the sequence of DNA from a fetus. The method is especially useful for detection of chromosomal abnormalities in a fetus including translocations, transversions, monosomies, trisomies, and other aneuploidies, deletions, additions, amplifications, translocations and rearrangements.

BACKGROUND ART

[0003] Chromosomal abnormalities are responsible for a significant portion of genetic defects in liveborn humans. The nucleus of a human cell contains forty-six (46) chromosomes, which contain the genetic instructions, and determine the operations of the cell. Half of the forty-six chromosomes originate from each parent. Except for the sex chromosomes, which are quite different from each other in normal males, the chromosomes from the mother and the chromosomes from the father make a matched set. The